

System and Method for Electronic Inventory

Abstract

5 A system and method for conducting an inventory of tags, wherein each
tag is assigned a Tag ID and a manufacturer number. Each tag can be attached
to an item to take inventory of those items. A tag reader transmits a wake-up
signal followed by at least one clock signal. Each tag increments a first tag count
in response to the clock signals, and transmits the Tag ID assigned to the tag
when the first tag count corresponds to the Tag ID assigned to the tag. The tag
10 reader records the transmitted Tag IDs. When more than one tag transmits
simultaneously, the tag stores the Tag ID in order to resolve the contention when
the first read cycle is complete. In the second read cycle, the tag reader transmits
the contended Tag ID followed by at least one clock signal. Each tag that
contended for the transmitted Tag ID increments a second tag count in response
15 to the clock signals, and transmits the manufacturer number assigned to the tag
when the second tag count corresponds to the manufacturer number assigned to
the tag. The tag reader records the transmitted Tag IDs, completing the inventory
of the tags.